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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,159	02/13/2001	Michael R. Krause	10001459-1	2070

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EXAMINER

BONURA, TIMOTHY M

ART UNIT	PAPER NUMBER
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2114

5

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,159

Applicant(s)

KRAUSE ET AL

Examiner

Tim Bonura

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 14 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- **Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**
- **Claims 10-13 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, et al., U.S. Patent Number 6,161,198, and in further view to Chan, U.S. Patent Number 6,539,446.**

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The limitation in claim 1 of “wherein logical operations associated with steps (d)-(g) are implemented in at least one selection from the list of: hardware; and firmware”. The term “associated with” does not concretely and tangibly embody the monotonic sequence number on hardware or firmware.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-13 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, et al., U.S. Patent Number 6,161,198, and in further view to Chan, U.S. Patent Number 6,539,446. Regarding claim 10:

a. Regarding the limitation of “a plurality of sequence number devices, connected via a fabric, including at least a primary sequence number generator and a secondary sequence number generator”, Hill discloses a system with two sequence number generators. The first generator is connected directly to Host A (See Figure 5, item 502 and Lines 35-39 of Column 7). The second generator is connected directly to Host B (See Figure 5, item 504 and Lines 49-52 of Column 7). Host A and B are connected. (See Figure 5, Items 522, 524, and 514).

b. Regarding the limitation of “the primary sequence number generator disposed to receive sequence number request from an originating device and to forward sequence number response to the secondary sequence number generator”, Hill discloses a system wherein a processing unit transmits a message and includes a sequence number. (Lines 6-8 of Column 2). Hill, as shown in the first limitation, has a first generator connected to it. (See Figure 5, item 502 and Lines 35-39 of Column 7). Hill also discloses a second generator, (See Figure 5, item 504 and Lines 49-52 of Column 7). Hill does not disclose a system that the first generator forwards the sequence number to the second generator. However, Chan discloses a system wherein lock data is generated for a first node and can be passed to a second node. The second node is ability to access the locked device. (Lines 40-52 of Column 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Hill with the data passing structure

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of Chan to achieve a sequence number passing system in which the sequence number is available if a node fails. One of ordinary skill in the art would have been motivated to combine the references of Hill and Chan because Hill discloses a system wherein upon a processing unit failing, sequence numbers and numerical data are lost during the failure. (Lines 20-28 of Column 4). Chan discloses a system that can save "lock data", numerical data, on a second node in case the original data is lost or unusable. (Lines 20-25 of Column 4). Therefore it would have been an improvement on the system of Hill to incorporate the data passing of Chan so that numerical data can be maintained.

c. Regarding the limitation of "the secondary sequence number generator disposed to receive the sequence number response, store the sequence number response in memory, and forward the response to the originating device", Chan discloses a system wherein the a second node can store the lock data and use the data to manage a resource. (Lines 35-50 of Column 4).

5. Regarding claim 11, Hill discloses the system in which application software manages the messages that are passed amongst the host. The message generates sequence numbers to be generated. (Lines 35-45 of Column 7).

6. Regarding claim 12, Hill discloses a system wherein the applications produce messages that included sequence numbers attached to the messages. (Lines 41-45 of Column 7). It would therefore be inherent that a sequence number is generated when a message is produced by an application. (See claim 1).

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7. Regarding claim 13, Hill disclose a system wherein a sequence number is generated and attached to a message waiting in a queue to be sent to the transaction processing system. (Lines 48*57 of Column 2).

8. Regarding claim 15, Hill discloses a system where the primary and secondary number generators store current sequence number in memory. (Lines 58-62 of Column 2).

9. Regarding claim 16, Hill discloses a system wherein the sequence numbers are associated with sequential transmitted source messages. (Lines 23-27 of Column 2).

10. Regarding claim 17, Chan discloses a system wherein the second node is used for copying data for backup purposes. (Lines 42-50 of Column 4).

11. Regarding claim 18:

d. Regarding the limitation of, "detecting that a primary sequence number generator is unavailable," Hill discloses a system with a primary sequence number generator. (See Figure 5, item 502 and Lines 35-39 of Column 7). Hill also discloses that a host processing until, such as host A in Figure 5, can recover from a failure. It would be inherent that detection of the failure much occurs if recovery can proceed.

e. Regarding the limitation of, "selecting a first replacement sequence number generator for the primary sequence number generator," Hill discloses a system wherein a processing unit transmits a message and includes a sequence number. (Lines 6-8 of Column 2). Hill, as shown in the first limitation, has a first generator connected to it. (See Figure 5, item 502 and Lines 35-39 of Column 7). Hill also discloses a second generator, (See Figure 5, item 504 and Lines 49-52 of Column 7). Hill does not disclose a system a replacement generator is set. However, Chan discloses a system wherein lock

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data is generated for a first node and can be passed to a second node. The second node is ability to access the locked device. (Lines 40-52 of Column 3). Chan also discloses that if the failure occurs, the secondary node will take over processing of the lock device. (Lines 1-6 of Column 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Hill with the data passing structure of Chan to achieve a sequence number passing system in which the sequence number is available if a node fails. One of ordinary skill in the art would have been motivated to combine the references of Hill and Chan because Hill discloses a system wherein upon a processing unit failing, sequence numbers and numerical data are lost during the failure. (Lines 20-28 of Column 4). Chan discloses a system that can save "lock data", numerical data, on a second node incase the original data is lost or unusable. (Lines 20-25 of Column 4). Therefore is would have been an improvement on the system of Hill to incorporate the data passing of Chan so that numerical data can be maintained.

f. Regarding the limitation of, "selecting a second replacement sequence number generator for a secondary sequence number generator," Hill discloses a system with a second number generator. (See Figure 5, item 504 and Lines 49-52 of Column 7). The second number generator able to generate a second sequence number for a source message. (Lines 60-63 of Column 2).

g. Regarding the limitation of, "communicating a current sequence number," Hill discloses a post-recovery retransmission of the source message with the sequence number. (Lines 30-38 of Column 2).

- h. Regarding the limitation of, “communicating to each available device of the plurality of sequence number devices identifiers of the first and second replacement sequence number generators,” Chan discloses a system wherein lock data can be made available nodes upon failure detection. (Lines 6-11 of Column 5).
12. Regarding claim 19, Hill discloses a system wherein the current sequence number is stored prior to failure. (Lines 28-30 of Column 2). Hill also discloses that during a post-recovery procedure, the store sequence number is used to re-transmit the failed data. (Line 30-34 of Column 2).

Claim Objections

13. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). Please correct numbering issues concerning claims 9 and 17.

Allowable Subject Matter

14. Claims 14 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tim Bonura**.

- The examiner can normally be reached on **Mon-Fri: 7:30-5:00, every other Friday off**. The examiner can be reached at: **703-305-7762**.

16. If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, **Rob Beausoliel**.

- The supervisor can be reached on **703-305-9713**.

17. The fax phone numbers for the organization where this application or proceeding is assigned are:

- **703-872-9306 for all patent related correspondence by FAX.**

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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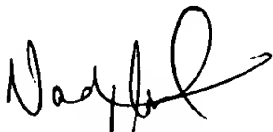
19. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **receptionist** whose telephone number is: **703-305-3900**.

20. Responses should be mailed to:

○ **Commissioner of Patents and Trademarks**

P.O. Box 1450

Alexandria, VA 22313-1450


NADEEM IQBAL
PRIMARY EXAMINER

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February 20, 2004

Tim Bonura
Examiner
Art Unit 2114